Greenland Will Cause Sea Rise First, Not Antarctica

by Glenn Rogers

•••••••••• August 15, 2023 ••••••••••

Decades ago in Greenland, scientists drilled 4,500 feet into the ice, gathering a twelve-foot-long core sample of soil. That occurred in 1966, when technology was unavailable to research the soil sample with its seeds, twigs, moss and leaves inside

In 2017 the core sample was rediscovered, and research began anew. Scientists discovered that the Greenland ice sheet is not millions of years old but only 416,000 years old.

RESEARCH FINDINGS

Furthermore, we learned that Greenland's ice sheet is very fragile.

Unfortunately, now we know that a moderate temperature rise could melt that massive block of ice and that the temperature long ago in Greenland, when no ice was present, was similar to comparable temperatures on Earth today. Even more importantly, the amount of carbon in the atmosphere today is 1.5 times higher than 416,000 years ago!

That would indicate we could expect much more ice to melt in the future. Should all the ice in Greenland melt, we could expect the sea level rise an additional 23 feet.

LUMINESCENCE TECHNOLOGY

Experts used luminescence technology to indicate the age of the soil samples last exposed to light.

That technology was not available in 1966. Sadly, when ice vanishes, it is replaced with soil or water. Both these conditions add to global warming since they absorb heat, unlike ice which reflects the sun's energy away from the earth's surface.

DIRE CONSEQUENCES

Therefore, what is needed is to bring climate temperature rise back to zero. And we need to remove much of the carbon in our atmosphere today. Without this, we can expect the Greenland ice sheet to melt quickly and sea level rise to be quicker than we expected.

That would indicate we could expect much more ice to melt in the future. Should all the ice in Greenland melt, we could expect the sea level rise an additional 23 feet.”

Sea-rise barriers on the River Thames

SAN FRANCISCO'S SEAWALL PLAN

With this new information, it would seem too ambitious to create a wall high enough to stop sea level rise in our estuary.

Imagine having a wall high enough to save us from flooding next to the Embarcadero. It would completely block the view of the S.F. Bay. A better idea is to stop water from entering San Francisco Bay in the first place. The sea floor is said to be shallow at the "Potato Patch" near the entrance to San Francisco Bay." Maybe a device similar to those that protect London from the Thames River could be engineered when the inevitable sea rise becomes a problem?

Of course, a better solution is to stop global warming in the first place. However, in this, San Francisco needs help from the entire world — that does not seem likely to happen in the near future!

Glenn Rogers, RLA
Landscape Architect / License 3223

August 15, 2023